

7. The apparatus of claim 94 wherein the fibers segments are oriented in a random orientation.

85 9. The apparatus of claim 1 wherein the fibers in the fiber matrix are of a non-uniform length.

86 13. The apparatus of claim 12 wherein the fiber matrix is applied circumferentially such that the fibers have a predetermined orientation at a predetermined angle with respect to an axis of the electrical element.

87 17. The apparatus of claim 1 wherein the fiber matrix is applied vertically.

88 22. An electrical apparatus comprising:
an electrical element comprising a bonded disk stack having an outer surface, the bonded disk stack having a rating of at least 6 kV; and
a reinforcing structure attached to the outer surface and constructed so as to enable the bonded disk stack to withstand at least one 100 kA impulse, wherein the reinforcing structure comprises a fiber matrix pre-impregnated with a resin, the fiber matrix comprising a pre-woven fabric.

23. The apparatus of claim 22 wherein the bonded disk stack comprises more than two MOV disks.

89 26. The apparatus of claim 22 wherein the fiber matrix is applied vertically. --

Please add claims 55-96.

-- 55. The apparatus of claim 1 wherein the reinforcing structure has a uniform thickness.--

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-- 56. The apparatus of claim 1 wherein the reinforcing structure is configured to reinforce a selected portion of an area of the monolithic MOV disk along a lengthwise axis of the disk. --

-- 57. The apparatus of claim 56 wherein the selected portion of the area comprises less than all of the area. --

-- 58. The apparatus of claim 56 wherein the selected portion of the area comprises an area excluding the ends of the monolithic MOV disk. --

-- 59. The apparatus of claim 56 wherein the selected portion of the area comprises an area including a center of the monolithic MOV disk. --

-- 60. The apparatus of claim 5 wherein the predetermined orientation is based upon the orientation of the fabric with respect to the axis. --

-- 61. The apparatus of claim 5 wherein the predetermined orientation is based upon a woven pattern of the fibers in the pre-woven fabric. --

-- 62. The apparatus of claim 5 wherein the predetermined orientation comprises one of approximately zero degrees and approximately ninety degrees with respect to the axis. --

-- 63. The apparatus of claim 13 wherein the predetermined angle is based upon the angle of the fabric with respect to the axis. --

-- 64. The apparatus of claim 13 wherein the predetermined angle is based upon a woven pattern of the fibers in the pre-woven fabric. --

-- 65. The apparatus of claim 13 wherein the predetermined angle comprises one of approximately zero degrees and approximately ninety degrees with respect to the axis. --

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-- 66. The apparatus of claim 22 wherein the bonded disk stack has a rating between approximately 6 kV and approximately 800 kV. --

-- 67. The apparatus of claim 22 wherein the electrical apparatus is constructed so as to withstand at least one 100 kA impulse. --

-- 68. The apparatus of claim 22 wherein the fibers in the fiber matrix are oriented in a predetermined orientation with respect to an axis of the electrical element. --

-- 69. The apparatus of claim 68 wherein the predetermined orientation is based upon the orientation of the fabric with respect to the axis. --

-- 70. The apparatus of claim 68 wherein the predetermined orientation is based upon a woven pattern of the fibers in the pre-woven fabric. --

-- 71. The apparatus of claim 68 wherein the predetermined orientation comprises one of approximately zero degrees and approximately ninety degrees with respect to the axis. --

-- 72. The apparatus of claim 68 wherein the fibers in the fiber matrix are oriented parallel to the axis. --

-- 73. The apparatus of claim 22 wherein the fibers in the fiber matrix are of a uniform length. --

-- 74. The apparatus of claim 22 wherein the fibers in the fiber matrix are of a non-uniform length. --

-- 75. The apparatus of claim 22 wherein the fibers in the fiber matrix comprise fiberglass. --

-- 76. The apparatus of claim 22 wherein the fibers in the fiber matrix comprise a non-conductive material. --

85 -- 77. The apparatus of claim 22 wherein the fiber matrix is applied circumferentially. --

-- 78. The apparatus of claim 77 wherein the fiber matrix is applied circumferentially such that the fibers have a predetermined orientation at a predetermined angle with respect to an axis of the electrical element. --

-- 79. The apparatus of claim 78 wherein the predetermined angle is based upon the angle of the fabric with respect to the axis. --

-- 80. The apparatus of claim 78 wherein the predetermined angle is based upon a woven pattern of the fibers in the pre-woven fabric. --

-- 81. The apparatus of claim 78 wherein the predetermined angle comprises one of approximately zero degrees and approximately ninety degrees with respect to the axis. --

-- 82. The apparatus of claim 78 wherein the predetermined angle is an angle less than approximately 50 degrees. --

-- 83. The apparatus of claim 82 wherein the angle is between approximately 3 degrees and approximately 10 degrees. --

-- 84. The apparatus of claim 77 wherein the circumferentially applied fiber matrix has a predetermined thickness. --

-- 85. The apparatus of claim 22 wherein the fiber matrix is applied vertically. --

-- 86. The apparatus of claim 85 wherein the vertical application comprises at least one piece of fiber matrix placed in a vertical orientation along an axis of the electrical element. --

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-- 87. The apparatus of claim 85 wherein the vertical application comprises a single piece of fiber matrix placed in a vertical orientation along an axis of the electrical element and having a sufficient width to cover the majority of an outer surface of the electrical element. --

-- 88. The apparatus of claim 22 wherein the reinforcing structure further comprises at least one layer of pre-impregnated fiber matrix applied circumferentially and at least one layer of pre-impregnated fiber matrix applied vertically. --

-- 89. The apparatus of claim 22 wherein the reinforcing structure has a uniform thickness. --

-- 90. The apparatus of claim 22 wherein the reinforcing structure is configured to reinforce a selected portion of an area of the bonded disk stack along a lengthwise axis of the bonded disk stack. --

-- 91. The apparatus of claim 90 wherein the selected portion of the area comprises less than all of the area. --

-- 92. The apparatus of claim 90 wherein the selected portion of the area comprises an area excluding the ends of the bonded disk stack. --